APPENDIX OF CURRENTLY PENDING CLAIMS

1. An apparatus for automatically processing a specimen from aqueous fluid to an infiltrating medium and reprocessing the specimen from the infiltrating medium to the aqueous fluid comprising in combination:

a processing chamber for holding a specimen, said chamber comprising a sealable space for containing various liquids used, and conduits that connect the chamber to liquid containing containers;

a fluid flow selector for selecting a fluid to flow to the processing chamber;

a pressure regulator for regulating pressure in the processing chamber, the pressure regulator comprising at least one pressure sensor, the pressure sensor being in fluid communication with the processing chamber;

a temperature regulator for regulating temperature in the processing chamber, the temperature regulator comprising at least one temperature sensor, the temperature sensor being in thermal communication with the processing chamber;

at least one container of infiltrating medium, at least one container of a clearant agent, at least one container of a dehydrant agent and at least one container of an aqueous fluid, the containers of clearant, dehydrant and aqueous fluid being connected to the processing chamber via the fluid flow selector; and

a control device having a processor and a memory device, the processor controlling:

· the fluid flow selector to connect any of the containers to the processing chamber in any sequence,

· the pressure regulator, and

· the temperature regulator, thereby automatically and sequentially processing and reprocessing the specimen.

2. The apparatus of claim 1 wherein the fluid flow selector includes at least one rotary valve and wherein the processor selects the containers of clearant, dehydrant or aqueous fluid by setting the rotary valve.

3. The apparatus of claim 1 wherein the container of infiltrating medium is connected to the processing chamber by a second valve and wherein the processor controls the second valve.

4. The apparatus of claim 3 wherein the processor further controls the fluid flow selector and the second valve in order to automatically and sequentially, after connection to the container of aqueous fluid, connect the processing chamber with the container of dehydrant agent, the container of clearant and the container of infiltrating medium in order to process the specimen.

5. The apparatus of claim 1 further comprising a container of purge dehydrant for cleaning the processing chamber of clearant, the container of purge dehydrant being connected to the processing chamber by the fluid flow selector, the processor controlling the fluid flow selector in order to automatically and sequentially connect the processing chamber with the container of clearant agent, the container of purge dehydrant, the container of dehydrant agent and the container of aqueous solution

in order to reprocess the specimen.

6. The apparatus of claim 5 further comprising a container of purge clearant for cleaning the processing chamber of infiltrating medium, the container of purge clearant being connected to the processing chamber by the fluid flow selector, the processor controlling the fluid flow selector in order to automatically and sequentially connect the processing chamber with the container of purge clearant, the container of clearant agent, the container of purge dehydrant, the container of dehydrant agent and the container of aqueous solution in order to reprocess the specimen.

23. An apparatus for automatically reprocessing a specimen from an infiltrating medium to an aqueous fluid comprising in combination:

a processing chamber for holding a specimen, said chamber comprising a sealable space for containing various liquids used, and conduits that connect the chamber to liquid containing containers;

a fluid flow selector for selecting the fluid to flow to the processing chamber;

at least one container of a clearant agent;

at least one container of contaminated dehydrant agent;

at least one container of a dehydrant agent, the contaminated dehydrant agent being contaminated with the clearant agent more that the dehydrant agent;

at least one container of an aqueous fluid, the containers of clearant, contaminated dehydrant, dehydrant and aqueous fluid being connected to the processing chamber via the fluid flow selector; and

a control device controlling the fluid flow selector in order to automatically and sequentially connect the processing chamber with the container of clearant agent, the container of contaminated dehydrant agent, the container of dehydrant agent and the container of aqueous solution in order to reprocess the specimen.

24. The apparatus of claim 23, further comprising

at least one container of contaminated clearant agent, the contaminated clearant agent being contaminated with the infiltrating medium more than the clearant agent,

wherein the at least one container of contaminated clearant agent is connected to the processing chamber via the fluid flow selector, and

wherein the control device controls the fluid flow selector in order to automatically and sequentially connect the processing chamber with the container of contaminated clearant agent, clearant agent, the container of contaminated dehydrant agent, the container of dehydrant agent and the container of aqueous solution in order to reprocess the specimen.

25. The apparatus of claim 24, wherein the contaminated clearant agent is used to clean the processing chamber of infiltrating medium.

26. The apparatus of claim 25, wherein the contaminated clearant agent is purge clearant.

27. The apparatus of claim 25, wherein the contaminated dehydrant agent is

used to clean the processing chamber of clearant.

28. The apparatus of claim 27, wherein the contaminated dehydrant agent is purge dehydrant.

29. The apparatus of claim 24, wherein the infiltrating medium comprises paraffin.

30. The apparatus of claim 23, wherein the fluid flow selector may connect any of the containers to the processing chamber in any sequence.

31. The apparatus of claim 30, wherein the fluid flow selector comprises a rotary valve and wherein the control device selects the containers of clearant, contaminated dehydrant, dehydrant or aqueous fluid by setting the rotary valve.

32. The apparatus of claim 30, wherein the apparatus automatically processes the specimen from the aqueous fluid to the infiltrating medium, and

wherein the control device controls the fluid flow selector to connect the processing chamber with the container of aqueous solution, the container of dehydrant agent, the container of clearant agent and the container of infiltrating medium, in order to automatically and sequentially process the sample.